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ABSTRACT

N. Porter and N. Taylor's written version of the L. Kohlberg moral reasoning questionnaire was administered to 253 students entering The National Technical Institute for the Deaf, and Form A of the Kohlberg interview schedule was used for in-depth interviews of 10 students. Results indicated that more than 80% of the Ss were reasoning at a "preconventional" (stage one and two) level in which rules are interpreted in terms of physical or hedonistic consequences of action and physical power of those determining the rules. Findings suggested that concerns about the moral reasoning skills of young deaf adults are warranted. (Author/CL)

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A Cognitive-Developmental Investigation of Moral Reasoning in a Deaf Population

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ABSTRACT

Porter and Taylor's written version of the Kohlberg moral reasoning questionnaire was administered to 253 students entering the National Technical Institute for the Deaf using procedures designed especially for a deaf population. Form A of the Kohlberg interview schedule was used for in-depth interviews of ten entering students. The results indicate that more than eighty percent of the subjects were reasoning at a "preconventional" (stage one and two) level. This strongly suggests that concerns about the moral reasoning skills of young deaf adults are warranted and worthy of further investigation.

Introduction

In recent years, educators of the deaf have become increasingly convinced that enhancing personal and social skills is vital to the education of hearing-impaired students. At the same time, educators and social scientists have devoted a great deal of attention to the development of social and moral reasoning in educational settings. In daily life we must all confront and deal with ethical dilemmas, either in person or at the ballot box.

Memorization of a set of moral rules may lead to moral behavior in ordinary situations. However, without a clear understanding of the moral principles underlying the rules, the probability of appropriate application of the rule is minimal when a unique situation is encountered. To be responsible citizens and successful leaders requires the ability to see and comprehend multiple points of view, to analyze them and to select the most appropriate solutions. This ability is basic to social development. It has been the theme of at least two recent conferences (ETS Invitational Conference on Moral Development, 1974; NIE National Conference on Planning for Moral/Citizenship Education, 1976) and has been called crucial to education by the New York State Board of Regents (1976).

Literature Review

Moral Development Theory

Lickona (1975) observes that a majority of theorists agree upon a number of antecedents of moral development: basic cognitive ability; involvement

in varied social interactions that expose individuals to more mature thinking, to conflicting viewpoints and to discussions of consequences and reasons for various viewpoints; roletaking ability, enhanced by social interactions; a level of cognitive dissonance sufficiently high to induce action, but not so high as to produce disorder; good models to imitate; prior need satisfaction; help in relating behavior or thoughts to one's highest capacity for reason; and finally, the support of the social environment.

One prominent moral development theory, the Cognitive-Developmental Theory, was developed by Kohlberg and based largely upon the works of Dewey and Piaget. Kohlberg (1969) presents an elaborate description of the theory. According to Kohlberg, exposure to multiple viewpoints creates cognitive dissonance that is relieved only when individuals develop an understanding of increasingly consistent reasons for action. He hypothesizes that with sufficient cognitive ability and social interaction, any person can attain a high level of moral reasoning. Development proceeds slowly, through a vertical hierarchy of stages, each growing out of and including prior stages. Stages are qualitatively different, representing redefinitions of the principles of justice. Environmental stimulation (social interaction) and active cognitive reorganization are required for development. Gradual development and generalization of principles to new issues results in reasoning on a predominant (but not exclusive) stage of reasoning at any one time. Kohlberg (1976) conceptualizes a "necessary but not sufficient" relationship

between cognitive development, roletaking ability, moral reasoning, and moral behavior (in that order) such that a given level of development must be attained in any one domain in order to allow (but not guarantee) parallel development in later domains.

Kohlberg hypothesizes six stages of moral reasoning, clustered into three (3) levels, described elsewhere in detail (Kohlberg, 1969). Briefly, the levels are as follows:

Preconventional level: (Stages 1 & 2) Rules are interpreted in terms of physical or hedonistic consequences of action and physical power of those determining the rules.

Conventional level: (Stages 3 to 4) Societal rules and expectations are actively maintained and supported.

Postconventional level: (Stages 5 & 6) Principles and values are held, that have validity apart from any specific group.

There is evidence in the literature that under normal circumstances development proceeds through stage 3 (Arbuthnot, 1975; Haan 1975; Hewitt, 1975; Porter & Taylor, 1974; Simpson, 1974; White, 1975) and general agreement that upper stages (4, 5 and 6) are superior to stages 1, 2 and 3 but disagreement regarding the exact relationship between them (Arbuthnot, 1975; Hogan, 1970, 1973; Holstein, 1972; Kuhn, 1976). Kohlberg reports that most people reach conventional level reasoning by the end of high school (Kohlberg & Turiel, 1971). The bulk of evidence indicates that conventional level reasoning is the dominant adult level of moral reasoning in the USA (Kurtines & Grief, 1974). Loevinger (Chickering, 1974) and Hogan (1973) maintain that while principled reasoning is the ideal, most people can be expected to reach the social conformity of the conventional levels.

Moral Development of Nonstandard Populations

To the authors' knowledge no attempts have been made to investigate moral reasoning of any handicapped or disabled groups. Kohlberg (1969) studied some educationally disadvantaged, "lower-class urban groups," finding generally slower development of moral reasoning compared to middle class peers. Questions of culture bias are relevant here (Kurtines & Grief, 1974; Simpson, 1974). Kohlberg (1969) hypothesizes that lower levels result from less varied opportunities for roletaking and participation in secondary institutions. While there are a few studies in progress including a study by Galbraith of George Peabody College on moral reasoning among various socioeconomic groups and Fincham of the University of the Witwatersrand, Johannesburg, South Africa on moral reasoning among learning disabled children, there is very little known about the moral reasoning levels of groups differing from the majority in America.

Historically there have been relatively few hearing-impaired persons attaining prominent leadership or career positions. This is partly due to lack of technical skills training, but there is also evidence that hearing-impaired persons are frequently weak in the roletaking, decision-making and analytical reasoning skills needed for problem solving in the social areas (Schlesinger & Meadow, 1972; Vernon, 1969). The observation is frequently made that many hearing-impaired persons are excessively dependent upon others for decisions and information. Furth (1966) and Furth & Youniss (1972) have studied the cognitive development and

capabilities of deaf and hearing children extensively and found that deaf children develop through Piaget's level of concrete operations along with hearing children but lag developmentally in acquisition of formal operations (as do subjects from cognitively impoverished environments). They conclude that deaf subjects have the potential to develop through formal operational levels but poor language abilities, poor communication at home, and lack of numerous stimulating experiences may create a cognitively impoverished environment, thus making it difficult for formal operational thought to emerge.

Numerous studies have found that many hearing-impaired persons have difficulties understanding personal relationships and roles of others, and lack insight into the consequences of personal actions (Altschuler, 1963; Levine, 1956; Mindel & Vernon, 1971; Schlesinger & Meadow, 1972; Vernon, 1969). A number of writers have suggested that the cause may lie in the effects of communication difficulties caused by deafness. Typically the hearing-impaired person receives limited exposure to a variety of social interactions and limited explanations of feelings, roles, reasons for actions and consequences of action. Given the general agreement of theorists as to the importance of these experiences for moral reasoning development, the effect of these limited experiences of deaf persons upon their moral reasoning development must be seriously considered. The premise in this paper is that most hearing-impaired persons have the basic cognitive ability to engage in moral reasoning at a high level, but may not have participated in sufficient social

interactions to learn about the thoughts and feelings of others, in a variety of situations.

Methods of Assessing Moral Reasoning

As yet, very few instruments have been developed to assess moral reasoning development. Piaget's, Rest's, Hogan's and Kohlberg's are the major instruments or methods available and considered for this study. Piaget's instrument consists of presentation of paired stories of transgressions. The subject has a forced choice, and then his/her thinking is probed. Stories are primarily designed for children. Time required for interviews, inappropriate level of stories and the lack of a well-defined instrument, make this inappropriate for the present study. Rest's Defining Issues Test consists of a written moral dilemma and list of definitions of the major issues involved. Subjects rate these for importance. The scale is objectively and quickly scored. However the language is very complex and could not be readily modified for this study. Hogan (1973) proposes the concurrent use of five (5) measures, then correlating and interrelating results for a final profile. While this may be feasible at some other time, it was not possible to modify and validate such a large number of tests for this study. Kohlberg's measure takes two forms (written and interview). Porter & Taylor's (1974) written version is accompanied by a scoring manual. The language of the dilemmas and questions posed could be easily modified without destroying the integrity of the test. Disadvantages are that scoring is difficult and time-consuming, there are questions about the use of

hypothetical vs real dilemmas, and there are all the typical problems of a projective test (Kurtines & Grief, 1974). Nonetheless this approach seemed to be the most appropriate for this study.

Testing a hearing-impaired population creates interpretation difficulties not normally encountered (Hess, 1969, Mangan, 1963). In particular, where language usage is required as a part of the test, problems of English comprehension and unusual interpretations or perceptions must be expected, (Garrison et al., 1978). Protocols must therefore be evaluated and modified to take this into account. Scorers should be experienced in communication with the hearing-impaired and familiar with the linguistic constructions, and concepts common to the deaf culture. Steps must be taken to minimize error from these sources.

Objectives of the Study

This study had two primary objectives:

1. To determine whether or not methods developed in the cognitive-developmental approach to moral reasoning could be adapted to investigating the moral reasoning abilities of post-secondary, hearing-impaired students. Specifically, could deaf students adequately understand and respond to the protocol? Could the protocols be reliably scored? Would written and interview methods produce similar results (validity)? Is it practical in terms of time, and other factors?

If the above method is found to be workable, the second step would be:

2. To conduct a baseline, descriptive study of moral reasoning abilities of entering NTID students. The purpose of this would be to see if concerns about moral reasoning level are warranted in this post-secondary hearing-impaired population. Since no assessment of this type has been attempted with a deaf population, a simple descriptive study is deemed appropriate.

Methods

Data Source

The 253 participants in this study were all students entering the National Technical Institute for the Deaf. One hundred ninety-eight students participated during the summer of 1975 and constituted the bulk of that entering class. Forty-four students were randomly sampled from the entering class of 1976 to verify the findings of the previous year. Ten students were selected at random from the class entering during 1977 for in-depth interviews in addition to the written protocol.

Instrumentation

The Kohlberg Questionnaire was the basic data collection instrument. A written protocol published by Porter and Taylor (1974) was used in group testing situations. This instrument consists of five of Kohlberg's nine hypothetical moral dilemmas (Heinz story, euthenasia, the tailor, the camp story, and stealing vs cheating). Each story was followed by a series of questions designed to elicit the reasoning used by the respondent in dealing with the dilemma. The protocol was modified slightly by substituting equivalent words or phrases where language problems might occur for deaf students. Outside evaluators confirmed that neither content nor tone was changed. The interviews were conducted following Form A of the interview protocol established by Kohlberg at the Moral Education Center, Harvard University. This included three of the five stories indicated above (1st, 4th and 5th) and probe questions for use by an interviewer who was skilled in all modes of communication with deaf students.

Procedures

For testing in 1975 and 1976, subject groups were attended by three test administrators. Instructions and the five (5) stories were given in simultaneous communication. After hearing or watching a story, subjects read it again from their test paper and responded with short written answers to the questions in the booklet. Only vocabulary questions were answered by the administrators. In 1977, students were given the written test individually following the procedures described above. In a second hour, after they had time to relax, the subjects were given three of the five stories to review and summarize for the investigator. The investigator then asked the protocol questions and probing questions as required to understand the subject's reasoning. All aspects of the interview were videotaped. Transcripts of the interviews were made and independently checked for accuracy by two persons highly skilled in all modes of communication with deaf students.

The group protocols were scored by the authors following the version of the Kohlberg system published by the Ontario Institute for Studies in Education (Porter & Taylor, 1974). Comparisons were made by moral maturity score, stage, and level designations. In 1975 an interjudge reliability coefficient of .87 was obtained from a sample of 25 protocols. A moral maturity score was computed from each subject on the five stories. The 1977 written protocols were scored as above by the senior author (Rater A), by a rater at the Ontario Institute for Studies in Education (Rater B), and by a rater at the Peabody Center for Economic

and Social Studies Education, George Peabody College (Rater C). Rater C also scored the interview transcripts, by the Harvard issue scoring method.

Results

Objective I - How well can Kohlberg's protocol be adapted for use in investigating moral reasoning abilities of post-secondary hearing-impaired students?

Most students indicated only moderate difficulty in understanding the revised written protocols. The problems that arose related specifically to comprehension of English words or structure; to differences in interpretation of meaning, to questions where the referent was not clear; and to broad, general issues. Interview questions created greater difficulties because of the large number of questions of a broad nature with implied referents. However, with the interview format, explanations were possible in nearly every instance. Student responses were generally perceived as adequate to the interviewer and videotape observers. The greatest difficulty encountered was that some students did not consistently discuss the reasons for their answers. Insufficient responses could not be scored. During the interview, some students had difficulty explaining their reasoning in depth, in response to probing questions. Nonetheless students were generally able to comprehend and respond adequately to the protocols.

Reliability scores varied with the precision of the measurement and the previous interaction between raters. In 1975, using Porter and Taylor's scoring manual for the written protocols, the authors achieved an internal reliability of .87 for even the finest level of scoring, i.e., the individual moral maturity score. However in 1977 reliabilities between the senior author and two external raters were quite low for both moral maturity scores and stage designations (Rater B/Rater A, r = .13; Rater A/Rater C, r = .53; Rater B/Rater C, r = .05).[a] A one-way ANOVA indicates a significant difference in scoring among the three raters, ($p < .005$) at these levels. There was no significant difference among raters ($x^2 = 1.03$, df = 2) in level designations (preconventional, conventional and postconventional). Hence agreement is acceptable for scoring the level of moral maturity but unacceptable for the finer distinctions of scoring.

The written and interview protocols were scored blind and independent. Both sets of scores are presented in Table I. Notice that most pairs are very similar. This indicates consistency and gives a measure of construct validity to the results. Three pair of scores differed from one another by 34-48 points. Examination of the protocols indicated that these contained a number of unclear, incomplete, or missing item responses, making the score tentative. Nevertheless there were no

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[a]Note that Rater A and Rater C used the Porter and Taylor scoring manual, whereas Rater B used a modified scoring system which may tend to yield higher scores for a given response.

significant differences between the maturity scores of the interview and written protocols ($t = -.024$). Rater C concluded that the two forms reflected consistent reasoning and that either method could be used to assess moral reasoning level. The author's impressions, drawn from comparisons of the interview transcript and the written protocol, were that students' answers were the same in spite of the greatly increased ease of communication found in the interview situations. All students were asked which approach they preferred and all stated that they felt they were much better able to explain their thoughts in the interview.

There are practical problems involved in the use of this protocol. The greatest of these is time. Each written protocol requires approximately 20 minutes to score using the Porter and Taylor manual. Interviews require a minimum of one hour per person to administer and cannot be scored without prior training at Harvard University. This training is costly, but the alternative, i.e., sending the protocols out for scoring, is also costly.

TABLE I

Comparison of Moral Maturity Scores of Harvard Interview and Porter and Taylor Written Protocol.[a]

Moral Maturity Scores		Absolute Difference in Points
Interview	Porter & Taylor	
125	115	10
117	131	14
147	143	4
186	220	34
164	130	34
138	134	4
129	139	10
133	154	21
131	154	23
180	132	48
$\bar{x}$ = 145.00	$\bar{x}$ = 145.20	t = -.024
sd = 23.804	sd = 28.747	

[a]Both were scored by Rater C.

Objective II - A descriptive survey of social reasoning abilities of entering NTID students

The authors felt that the consistency of scoring by levels, warranted a description of this population, by level. Table II shows the percent of students across the three levels, over a three year span. Notice that well over 80% of the tested students entering NTID in 1975, 1976 and 1977 were scored at the preconventional level. According to Kohlberg (1971), persons scoring at this level are "responsive to cultural rules and labels of good and bad, right and wrong, but interpret these labels in terms of either the physical or hedonistic consequences of action (punishment, rewards, exchange of favors) or in terms of the physical power of those who enuciate the rules and labels. If so, the majority of tested students apparently made their decisions about these moral dilemmas on the basis of either absolute obedience to authority, fear of punishment, or personal needs and desires. This is opposed to the conventional level of reasoning which considers the needs of society and others, personal intentions, and societal expectations or the post-conventional level wherein the moral principles of justice are considered in making a decision.

Table II

Percent Distribution by Year of Student Scores

Using Kohlberg's Levels of Moral Reasoning

Development.[a]

Year	Levels: Preconventional	Conventional	Postconventional	N	X
1975	91	9	0	198	218.85
1976	84	16	0	44	214.77
1977	90[b]	10	0	10	256.70
	90[c]	10	0		221.05
	100[d]	0	0		145.20

[a]1977 Data: Data of all three raters is presented.

[b]Rater B's data.

[c]Rater A's data.

[d]Rater C's data.

Both external raters made the following observations regarding the 1977 sample of students:

1. Scores as a whole are definitely lower than that expected of a typical teenager or entering college student.

2. There is unusual mention of, and reliance upon, authorities, organizations and other "systems" or "structures" for obtaining help in making individual decisions about critical problems.

3. There is an unusual acceptance of fate and a willingness to be patient or to just forget about things they wanted.

4. There is an unusual irregularity and spread of scores, such that there was no clear mode (making scoring tentative).

Rater C suggests that these students seem to have a very low perception of self in relation to systems and authority reflecting both a dependence upon systems and a fear of the same authority/obedience mechanisms. "The respondents...seem to hold their own ability for decisions on moral perspective in rather low esteem - one might even generalize that they reflect a certain 'powerless.'" On the other hand he also points out, and emphasizes, that the respondents had a much higher perspective of self and independence where affectional roles and relationships were concerned. (Both Rater A and Rater C found that a clear majority of the students scored higher on this aspect than on others).

Rater B noted that self-preservation appeared to have a very high priority for these students; that the students appeared to have been taught (rather rotely) the necessary social rules; and that love, the family, the relationships were apparent but not as strongly as in the general population.

Discussion

The data gathered in this investigation strongly suggests that concerns about the moral reasoning skills of young deaf adults are warranted. Consistently finding over a three year period that entering students were reasoning primarily on a preconventional level when hearing peers would be expected to be reasoning at a conventional level, is startling. There are, however, competing explanations for these results.

It might be argued that language difficulties and misinterpretations have caused a distortion which is sufficient to reduce observed levels. This is not likely. A very large change in reasoning would be required to move responses to the conventional level. Moreover, the interview was carried out in whatever mode of communication was best understood and preferred by the student. Students were asked to summarize the stories in their own words. Probing questions were used to clarify students' answers and elaborate explanations were given if needed. Nevertheless, students were not specifically asked to explain their perceptions of concepts and sentences. Recent efforts at NTID (Garrison et al, 1978) found large language and misinterpretation effects in a study of self-concept. A future study of moral development might address this question directly.

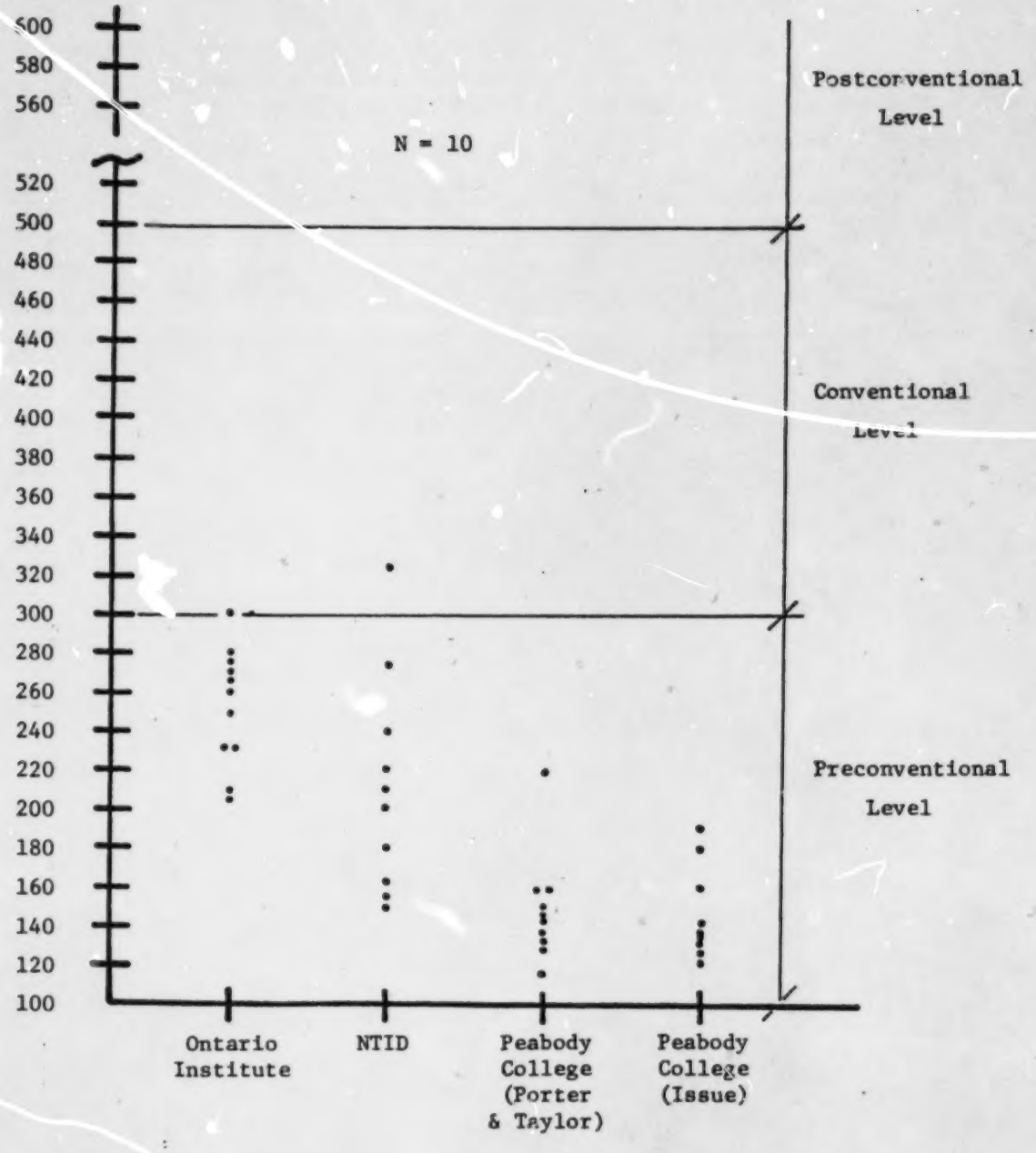
Another explanation might be that the scorers were biased, either by prior expectations (as with educators of the deaf) or by language level of response (as with those unfamiliar with deaf persons). For this

reason, we asked external raters to score the protocols without discussing factors which might lead one to expect particular scores. Also, while the written protocols were in students' own language, the interview transcripts were in correct English, paraphrasing the students' own words so that Rater C would not be biased by language. Three results are relevant here, 1) the consistency between the interview transcripts and written versions was high, 2) Rater B's scores were the highest of all three raters in spite of receiving only the written protocols, and 3) our own scores fell between those of the external raters (see Figure 1). These three facts indicate that biases such as those suggested above, were not a major factor.

If many hearing-impaired college students are reasoning on a preconventional level, it may be useful to speculate on the causes of this. It could be that students' experiential bases are not sufficient to permit consideration of a wide array of different viewpoints. Perhaps role-taking abilities (i.e., the ability to perceive a situation from the viewpoint of others) are not fully developed. Perhaps language deprivation has precluded assimilation of certain values desired by the larger society. Perhaps the students do not have the cognitive abilities required for conventional and postconventional levels of reasoning. Further investigation will be necessary before we have answers to these kinds of questions. However, the literature above suggests that communication difficulty which leads to a limitation of social interactions; to limited experiences with discussions of own and others' feeling,

Figure I

Distribution of Students 1977 Moral Maturity Scores on Kohlberg's Protocol, Across Three Raters and 10 Protocols



and discussions of reasons and consequences of actions; and to unusual dependence upon other people or institutions, is a likely explanation. Under these conditions cognitive development theory would predict that roletaking ability would not be highly developed and therefore moral reasoning could not be highly developed. Based on subjective observations of older deaf students and deaf adults, the authors believe that this may represent a developmental lag rather than a deficiency. It would be hypothesized that exposure to the college environment for several years will tremendously increase social interactions, and foster general independence such that moral development occurs very rapidly. Thus future research might include a longitudinal study of students throughout their college career.

Raters B and C made some observations about dependence upon authorities and systems for help in decision-making, and self-esteem in relation to systems versus individuals. Is there any other evidence to support these observations? The earlier references regarding the lack of leaders among the hearing-impaired, poor decision-making skills, and dependency upon others for decision-making are clearly relevant. Garrison et al (1978) found clear evidence that students had a higher self-esteem in regard to self and other people, than in relation to society or authorities. One can speculate that extended contact with over-protective parents, institutions or government agencies, unusually limited experiences in decision-making processes and generally limited knowledge of general facts (perhaps caused by the inability to effortlessly "absorb"

such information on a daily basis) could lead to characteristics such as those described by the raters. These same factors could also lead to acceptance of fate, particularly when decisions have been made for the individual without benefit of explanation.

Clearly there are psychometic and practical problems related to the use of this instrument with a deaf population. Poor interjudge reliability on all but the gross level of measurement is the greatest problem. Use of variant scoring manuals, training and background differences could account for some of the error but not all. Still this instrument might well be useful as a gross screening device. It is also possible that this instrument could be used to indicate development over time, where the precise starting and ending points are less important than relative change.

Educational Implications and Future Directions

In view of the evidence that these deaf students are reasoning at a level below that generally found at their age and that which is normative to society, it would appear that educational intervention may have immediate benefit. Even with this small sample, Rater C stated he had never felt so strongly that intervention would be helpful in giving the students a chance to look at issues and work with them. He feels that the students "...need an opportunity to think about problems involving themselves and organizations and to create or build decision-making

skills and social perspectives which might help them respond more affectively in a society which remains highly structured and 'systematized'". Perhaps it would be sound to establish a controlled study in which an educational intervention program was a treatment for a span of 2 years or more. Such a program could work to expand the students' base of social experiences and to provide practice in roletaking. It could provide knowledge of the various values desired by society, especially those values needed in careers for which students are training. Finally, it could stimulate guided discussions of relevant ethical problems. Such efforts are both theoretically sound and pedagagically reasonable. This is an area which has never been previously explored, and it may provide significant insights to the field of moral development.

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